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From: Coffman, Joel

Sent: Tue 12/1/2015 9:54:19 PM

Subject: From the New Sunrise Renewal Application... (F.Y.I.)

In the 1981 application to U.S. Environmental Protection Agency (USEPA) for Primacy of the Class II UIC program, the California Division of Oil, Gas, and Geothermal Resources (DOGGR) included the part of the Upper Tulare throughout the Midway - Sunset Oil Field as an exempt aquifer since it was already being used for the disposal of waters produced in the production of oil and gas. Figure S-1 is the map of the Midway

- Sunset Oil Field showing the limits of the field and exempted aquifer, and is taken from the Division of Oil and Gas's 1981 application. The depth to the top of the exempted part of the Alluvium was given as about 399 feet (ft) with a thickness of approximately 125-252 feet throughout the oilfield. The depth and thickness of the exempted aquifer correlates to the top of what is now called the Upper Tulare Formation "Air Sands" into which the Sunrise facility injects in Kern County, specifically comprising a depth interval of approximately 400 to 600 feet below ground surface.

Further, the RWQCB identifies the Tulare Formation as an oil-producing formation with no usable groundwater resources (no beneficial use) and is exempted administratively for the purposes of subsurface injection of produced oil field wastewater (citing the DOGGR exemption for Class II injection wells).

Understanding that the above cited aquifer exemptions were permitted for Class II injection wells, the Sunrise Class I injection wells inject water of a much better quality than the water that is typically injected in a Class II well, given that the water that Sunrise injects is of a relatively low total dissolved solid (TDS) and has low to non-detectable concentrations of organic compounds, as shown in Attachment N, and considering that not all of the above cited USEPA aquifer exemptions are explicitly limited to Class II injection wells, it is reasonable to consider that the aquifer exemption can be extended to the Sunrise Class I injection wells while maintaining the environmental protection objectives of the Underground Injection Control (UIC) and aquifer exemption regulations.